

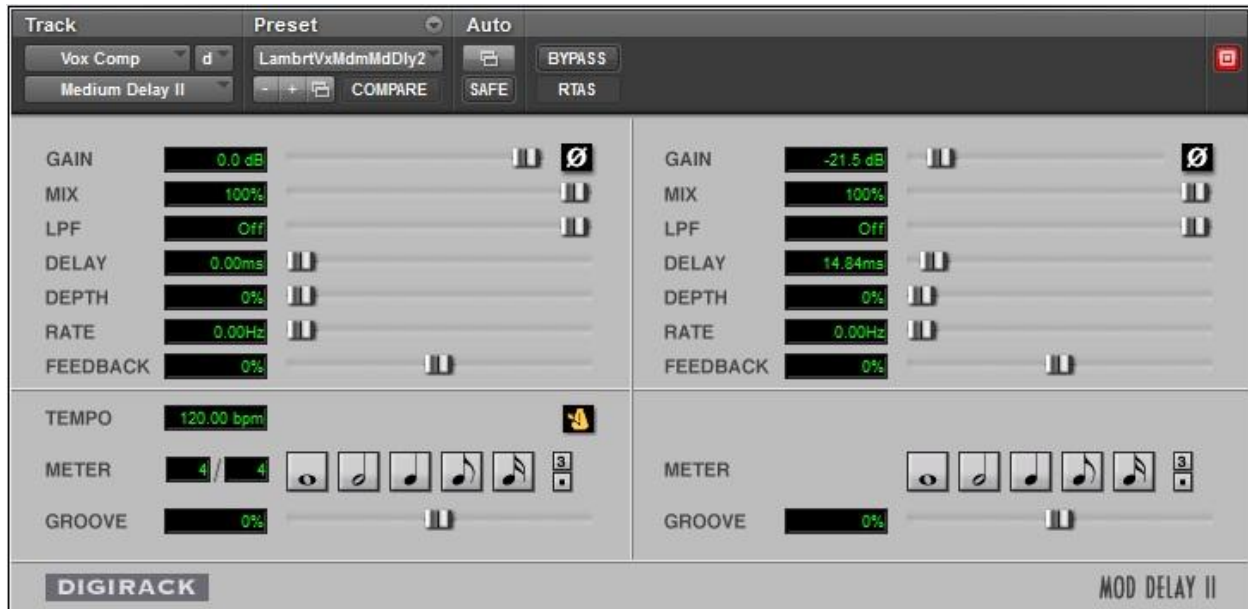
# Delay

Delays come in a few varieties:

- Tap delays allow you to click a button to set the delay time. This is handy if you don't know how many milliseconds of a delay that you need numerically but you do know how long of a delay you want.
- Time Adjustment or straight delays are useful to correct for latency. Latency is an unavoidable delay that happens as a result of processors taking time to process data before it can send it to your speakers. The more processor demanding an insert is the more latency it will introduce. It is often necessary to add a time adjustment delay on other tracks to keep them in perfect time with ones containing processor demanding effects. Your multitracking program will display latency for each track.
- Ping pong delays are stereo delays that alternate the signal between the left and the right.
- Phase/Flange delays are very short delays which are used to purposefully create loss of audio attributed to two superimposing audio signals being slightly out of phase. Phase delays are the shortest and remove certain frequencies creating an odd effect. Flange delays are a little longer and also produce a phase like effect.

DELAY TYPE	DELAY TIME
Phase Delay	
Flange Delay	
Vocal Embellishment Delay	14.84ms
Long Delay	

Your basic Waves delays come in short, medium and long. For most purposes the medium delay is appropriate:



The stereo Mod Delay II allows you to take a mono signal and assign a different amount of delay time to the left and the right. For this effect a stereo delay must be used.

Controls:

- Bypass
- Save
- Load
- Gain
- Mix
- Delay

This delay is being added to vocals to add a small amount of difference between the left and the right. This has the effect of bringing out the vocals slightly without turning them up.

Note that adding this mono to stereo effect your track has switched from mono to stereo. You can now pan the left and the right separately. Pan the left to the center, and leave the right on the right. What this will accomplish is adding a slight delay to only the right side.

In the plug in window, turn the delay on the left channel down to zero. Next turn the delay on the right channel to 14.84ms. Now turn the gain for the right channel down to -21dB.

It may be difficult to notice the difference between delay and no delay because there is such a small amount being added. The key to appropriate use of effects is subtlety. You may not be able to tell there is any delay at all, however, upon listening you can often hear when it gets bypassed.

This delay does not necessarily belong in all vocal tracks. Use your ears to decide if this effect helps you achieve the sound you are trying for.

## Reverb

There are two Waves reverbs that I find useful, the IR1, and Renaissance Verb(RVerb). TrueVerb does not sound good to me, but that does not mean that it doesn't have its uses. This is RVerb:



RVerb is a stereo plug in. If you insert it into a mono track it will change it into a stereo track. Make sure to pan appropriately.

Reverb is the most overused and abused audio effect. Originally intended to simulate a sound being played inside a hall or room, reverb is now used as an effect. Be very careful to avoid turning the reverb up very high. The key to good reverb usage is subtlety. A little goes a long way.

Controls:

- Bypass
- Save
- Load
- Predelay
- Time
- Size
- Diffusion
- Decay
- Early ref.
- Reverb
- Wet/Dry
- Gain

Bring Size down to an appropriately sized room. I will bring it down to 1.00 much of the time.

Turn down the “Time” control if you want the reverb to cut out sooner.

Turn down “Wet/Dry” to somewhere between 5 and 10.

If done right you won’t be able to tell there is any reverb on the vocals *at all* unless you solo the vocal track.